

CLAIMS

[1] A recorder/reproducer, comprising:

a content data moving unit operable to:

write a second content data into a second recording medium
5 that is different from a first recording medium, the second content
data being obtained by re-coding a first content data recorded in the
first recording medium;

write a first partial information extracted from the first
content data into the second recording medium; and

10 make the first content data irreproducible, using a first
invalidated partial information corresponding to the extracted first
partial information; and

a content data restoration unit operable to make the
irreproducible first content data reproducible, using the first partial
15 information recorded in the second recording medium.

[2] The recorder/reproducer according to Claim 1, further
comprising

a content data obtainment unit operable to:

20 accumulate the first content data;

generate the second content data from the first content data;

and

make the second content data irreproducible, using a second
invalidated partial information that is generated based on the first
25 partial information extracted from the first content data,

wherein said content data moving unit, when writing the
second content data into the second recording medium, is operable
to make the irreproducible second content data reproducible, using
a second partial information corresponding to the first partial
30 information extracted from the first content data.

[3] The recorder/reproducer according to Claim 1,

wherein said content data moving unit is operable to generate the first invalidated partial information corresponding to the extracted first partial information, and to make the first content data irreproducible by replacing the first partial information included in the first content data by the generated first invalidated partial information, and

said content data restoration unit is operable to make the first content data reproducible by replacing the first invalidated partial information included in the irreproducible first content data by the first partial information recorded in the second recording medium.

[4] The recorder/reproducer according to Claim 3,

wherein said content data moving unit is operable to write, into the second recording medium, the first partial information extracted from the first content data, before replacing the first partial information included in the first content data by the generated first invalidated partial information.

[5] The recorder/reproducer according to Claim 3,

wherein said content data moving unit is operable to replace the first partial information included in the first content data by the generated first invalidated partial information, while writing, into the second recording medium, the second content data that is obtained by re-coding the first content data.

[6] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to:

generate the second invalidated partial information corresponding to the extracted second partial information, and make the second content data irreproducible by replacing the second partial information included in the generated second content data by the generated second invalidated partial information; and

when making the irreproducible second content data reproducible, generate the second partial information corresponding to the extracted first partial information, and make the irreproducible second content data reproducible by replacing the second invalidated partial information included in the irreproducible second content data by the generated second partial information.

[7] The recorder/reproducer according to Claim 3,

wherein said content data moving unit is operable to replace the first partial information included in the first content data by the generated first invalidated partial information, while replacing the second invalidated partial information included in the irreproducible second content data by the generated second partial information.

[8] The recorder/reproducer according to Claim 1, further comprising

an accumulation unit operable to accumulate the first content data segmented into blocks,

wherein said content data moving unit is operable to extract, from the blocks, a predetermined block as the first partial information.

[9] The recorder/reproducer according to Claim 1,

wherein said content data moving unit is operable to extract one of the following as the first partial information, in the case where the first content data is content data multiplexed as a transport stream of MPEG-2 Systems: (a) a part of data of a TS packet constituting the first content data; (b) a part of data of a PES packet included in a payload of a TS packet constituting the first content data; (c) a part of data of a TS packet including a non-reference frame, out of TS packets constituting the first content data; and (d) a part of data of a TS packet in which "indicator" of a

PES packet indicates "1", the PES packet being included in the TS Packet constituting the first content data.

[10] The recorder/reproducer according to Claim 1,

5 wherein said content data moving unit is operable to extract, as the first partial information, a part of data of a PS packet constituting the first content data, in the case where the first content data is content data multiplexed as a program stream of MPEG-2 Systems.

10 [11] The recorder/reproducer according to Claim 1,

wherein said content data moving unit is operable to extract one of the following as the first partial information, in the case where the first content data is content data that is coded in
15 accordance with MP4: (a) a part of data of information indicating "Sample Size Boxes" included in the first content data; and (b) a part of data of information indicating "Sample to Chunk Boxes" included in the first content data.

20 [12] The recorder/reproducer according to Claim 1,

wherein said content data moving unit is operable to extract, as the first partial information, a part of data of information indicating "Slice Header" included in the first content data, in the case where the first content data is content data that is coded in
25 accordance with MPEG-2Video.

[13] The recorder/reproducer according to Claim 1,

wherein said content data moving unit is operable to extract one of the following as the first partial information, in the case
30 where the first content data is content data that is coded in accordance with MPEG-4Video: (a) a part of data of information indicating "Video Object Place Header" included in the first content

data; and (b) a part of data of information indicating "Video Packet Header" included in the first content data.

[14] The recorder/reproducer according to Claim 1,

5 wherein said content data moving unit is operable to extract, as the first partial information, a part of data of information indicating "RTSPHeader" included in the first content data, in the case where the first content data is content data that is coded in accordance with MPEG-4AVC (ITU-T H.264).

10 [15] The recorder/reproducer according to Claim 2, further comprising

 an accumulation unit operable to accumulate the second content data segmented into blocks,

15 wherein said content data moving unit is operable to extract, from the blocks, a predetermined block as the second partial information.

[16] The recorder/reproducer according to Claim 2,

20 wherein said content data moving unit is operable to extract one of the following as the second partial information, in the case where the second content data is content data multiplexed as a transport stream of MPEG-2 Systems: (a) a part of data of a TS packet constituting the second content data; (b) a part of data of a PES packet included in a payload of a TS packet constituting the
25 second content data; (c) a part of data of a TS packet including a non-reference frame, out of TS packets constituting the second content data; and (d) a part of data of a TS packet in which "indicator" of a PES packet indicates "1", the PES packet being
30 included in the TS Packet constituting the second content data.

[17] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to extract,
as the second partial information, a part of data of a PS packet
constituting the second content data, in the case where the second
content data is content data multiplexed as a program stream of
5 MPEG-2 Systems.

[18] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to extract
one of the following as the second partial information, in the case
10 where the second content data is content data that is coded in
accordance with MP4: (a) a part of data of information indicating
"Sample Size Boxes" included in the second content data; and (b) a
part of data of information indicating "Sample to Chunk Boxes"
included in the second content data.

15 [19] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to extract,
as the second partial information, a part of data of information
indicating "Slice Header" included in the second content data, in the
20 case where the second content data is content data that is coded in
accordance with MPEG-2Video.

[20] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to extract
25 one of the following as the second partial information, in the case
where the second content data is content data that is coded in
accordance with MPEG-4Video: (a) a part of data of information
indicating "Video Object Place Header" included in the second
content data; and (b) a part of data of information indicating "Video
30 Packet Header" included in the first content data.

[21] The recorder/reproducer according to Claim 2,

wherein said content data moving unit is operable to extract,
as the second partial information, a part of data of information
indicating "RTSPHeader" included in the second content data, in the
case where the second content data is content data that is coded in
5 accordance with MPEG-4AVC (ITU-T H.264).

[22] A recording/reproduction method comprising:

a content data moving step of:

10 writing a second content data into a second recording medium
that is different from a first recording medium, the second content
data being obtained by re-coding a first content data recorded in the
first recording medium;

writing a first partial information extracted from the first
content data into the second recording medium; and

15 making the first content data irreproducible, using a first
invalidated partial information corresponding to the extracted first
partial information; and

a content data restoration step of making the irreproducible
first content data reproducible, using the first partial information
20 recorded in the second recording medium.

[23] A recording/reproduction program causing a computer
system to execute:

a content data moving step of:

25 writing a second content data into a second recording medium
that is different from a first recording medium, the second content
data being obtained by re-coding a first content data recorded in the
first recording medium;

writing a first partial information extracted from the first
30 content data into the second recording medium; and

making the first content data irreproducible, using a first
invalidated partial information corresponding to the extracted first

partial information; and

a content data restoration step of making the irreproducible first content data reproducible, using the first partial information recorded in the second recording medium.

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[24] A semiconductor device comprising:

a content data moving unit operable to:

write a second content data into a second recording medium that is different from a first recording medium, the second content data being obtained by re-coding a first content data recorded in the first recording medium;

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write a first partial information extracted from the first content data into the second recording medium; and

make the first content data irreproducible, using a first invalidated partial information corresponding to the extracted first partial information; and

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a content data restoration unit operable to make the irreproducible first content data reproducible, using the first partial information recorded in the second recording medium.